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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/619,926	07/15/2003	Adrianus Johannes Heinen	USP169781A	6818

7590 08/24/2006
Daniel H. Golub
1701 Market Street
Philadelphia, PA 19103

EXAMINER

AVERY, BRIDGET D

ART UNIT	PAPER NUMBER
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3618

DATE MAILED: 08/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/619,926	HEINEN, ADRIANUS JOHANNES	
	Examiner	Art Unit	
	Bridget Avery	3618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4,6-14 and 17-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4,6-14 and 17-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-4, 6-14 and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beltrame et al. (US Patent 5,343,128).

Beltrame et al. teaches a traction assembly including a wheel (3) having a rotational axis, a first radius extending around the rotational axis to an exterior surface of the wheel (3), the exterior surface of the wheel engages a static, non-rotating surface (11 as described in column 3, lines 30-31) while the traction assembly is in operation; an electric motor including a rotor, a stator core and a stator winding (17) situated inside the wheel; a gap situated around the rotational axis between the rotor (15) and the stator (17), as clearly shown in Figures 1 and 2 (see column 2, lines 5-7); the electric motor exerts torque that drives the wheel; the torque having an arm extending from the rotational axis to a surface of the gap; and the traction assembly has a traction ratio, defined as the arm of the torque divided by the first radius of the wheel. Re claim 6, see permanent magnets (15). Re claim 8, see operating and control means (23), as stated in column 3, lines 51-57. Re claims 9-14, see central shaft (5) and Figures 1-3. Regarding the teaching of a direct-drive motor, see column 1, lines 21-30.

Beltrame et al. lacks the exact teaching of a traction ratio which is larger than 0.57, 0.65, 0.7, and smaller than 1.0.

However, it would have been obvious to one having ordinary skill in the art, at the time the invention was made, to provide a traction ratio that is larger than 0.57, 0.65, 0.7, and smaller than 1.0 since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. It would have also been an obvious design choice to design a wheel to have a traction ration that is larger than 0.57, 0.65, 0.7, and smaller than 1.0, to provide a wheel sized to accommodate the intended vehicle. Beltrame discloses the claimed invention except for an electric motor that fully and automatically drives the wheel. It would have been obvious to one having ordinary skill in the art, at the time the invention was made to provide an electric motor that fully and automatically drives a wheel, since it has been held that broadly providing a mechanical or automatic means to replace manual activity which has accomplished the same result involves only routine skill in the art.

Response to Arguments

2. Applicant's arguments with respect to claims 1-4, 6-14 and 17-20 have been considered but are moot in view of the new ground(s) of rejection.

In response to applicant's argument regarding the provision of a traction ration that is larger than 0.57", Stieg et al. (4,534,7480) provides evidence that drive tension and slip can be modified for all ranges of torque according to the traction ratio. It is noted that Stieg et al. teaches a traction ratio below 0.65 and a traction

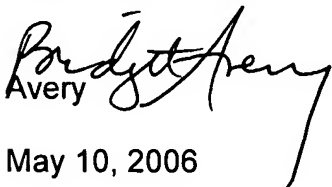
ratio of about 0.85. The traction ratio will determine tension and slip before any determination of the optimum or workable ranges (i.e. a traction ratio that is larger than 0.57).

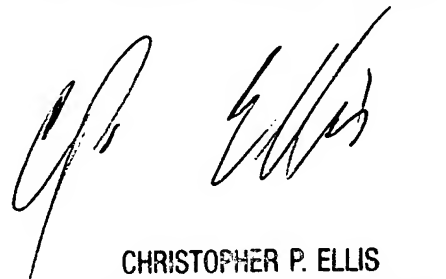
Conclusion

3. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

4. Any inquiry concerning this communication should be directed to Bridget Avery at telephone number 571-272-6691.


Avery
May 10, 2006


CHRISTOPHER P. ELLIS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600